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L7   ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2005:471961  HCAPLUS  Full-text
DOCUMENT NUMBER:          143:1314
TITLE:                    Use of 3-aza-1-oxa-dibenzo[e,h]azulenes for the
                          manufacture of pharmaceutical formulations for the
                          treatment and prevention of central nervous system
                          diseases and disorders
INVENTOR(S):              Mercep, Mladen; Mesic, Milan;
                          Pesic, Dijana; Dzapo, Iva
PATENT ASSIGNEE(S):       Pliva-Istrazivacki Institut D.O.O., Croatia
SOURCE:                   PCT Int. Appl., 38 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.          DATE
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     WO 2005049036         A1    20050602    WO 2004-HR54             20041119
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             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
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     CA 2546591            A1    20050602    CA 2004-2546591          20041119
     EP 1684766            A1    20060802    EP 2004-798733           20041119
     EP 1684766            B1    20070627
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     CN 1901918            A     20070124    CN 2004-80039454         20041119
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     AT 365556             T     20070715    AT 2004-798733           20041119
     ES 2289573            T3    20080201    ES 2004-798733           20041119
     IN 2006CN02229        A     20070608    IN 2006-CN2229           20060621
     US 20070111990        A1    20070517    US 2006-595938           20060811
     HK 1098670            A1    20080104    HK 2007-101111           20070131
PRIORITY APPLN. INFO.:                       HR 2003-959          A   20031121
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OTHER SOURCE(S):          MARPAT 143:1314
GI
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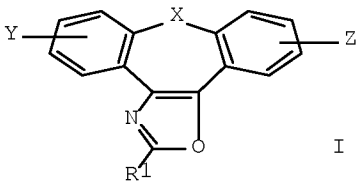

I

AB The present invention relates to the use of compds. from the group of 3-aza-1-oxadibenzo[e,h]azulenes (I; X = heteroatom such as O, S, SO, SO2, (un)protected NH; Y, Z = H, halo, alkyl, alkenyl, hydroxy, amino, thiol, sulfonyl, cyano, nitro, etc.; R1 = H, CHO, alkyl, carboxylic, etc.) and of their pharmacol. acceptable salts and solvates for the manufacture of a pharmaceutical formulation for the treatment and prevention of diseases, damages and disorders of the central nervous system (CNS) caused by disorders of the neurochem. equilibrium of biogenic amines or other neurotransmitters. Thus, an in vitro affinity of I compds. for binding to recombinant human 5-HT2A and 5-HT2C serotonin receptors expressed in CHO-K1 or COS-7 cells was determined using a radioligand. The radioligand binding was inhibited by the test compds. proportionally to the affinity of a certain compound for the receptor and to the concentration of the compound Compds. showing IC50 and Ki in concns. lower than 1 μM were considered to be active. Compds. 1-oxa-8-thia-3- azadibenzo[e,h]azulene, dimethyl[2-(1-oxa-8-thia-3-azadibenzo[e,h]azulen-2- ylmethoxy)ethyl]amine, [2-(1-chloro-1-oxa-8-thia-3-azadibenzo[e,h]azulen-2- ylmethoxy)ethyl]dimethylamine, [2-(5-chloro-1-oxa-8-thia-3- azadibenzo[e,h]azulen-2-ylmethoxy)ethyl]dimethylamine and 5-chloro-2-methyl-1,8-dioxa-3-azadibenzo[e,h]azulene showed binding affinity to 5-HT2A and 5-HT2C receptors expressed as IC50 value less than 200 nM and Ki value less than 100 nM.

IC ICM A61K031-55
ICS A61K031-424; A61P025-00; A61P025-18; A61P025-22; A61P025-24

CC 1-11 (Pharmacology)
Section cross-reference(s): 63

ST azaoxadibenzoazulene biogenic amine neurotransmitter nervous system disease; dibenzoazulene azaoxa biogenic amine neurotransmitter CNS disease

IT Central nervous system, disease
Human
(azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT Neurotransmitters
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT Amines, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(biogenic; azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2A, binding to; azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2C, binding to; azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT Opioid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(δ1-opioid, binding to; azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 50-67-9, Serotonin, biological studies 51-41-2, Norepinephrine 51-61-6, Dopamine, biological studies 56-86-0, L-Glutamic acid, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 612837-28-2, Dibenzo[2,3:6,7]thiepino[4,5-d]oxazole
612837-29-3, Dibenz[2,3:6,7]oxepino[4,5-d]oxazole
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612837-62-4 612837-63-5 612837-64-6
612837-65-7 612837-66-8 612837-67-9
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 50-67-9, Serotonin, biological studies 51-41-2, Norepinephrine 51-61-6, Dopamine, biological studies 56-86-0, L-Glutamic acid, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

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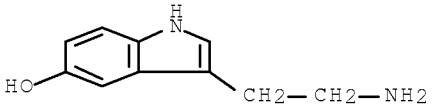

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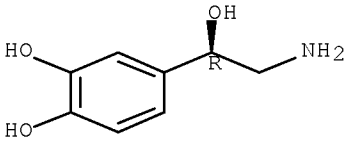

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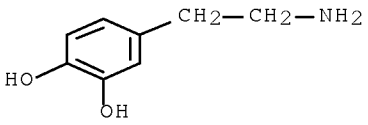

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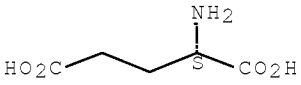
Absolute stereochemistry.



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RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(azaoxa-dibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)
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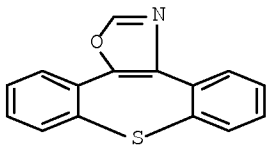

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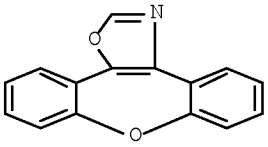

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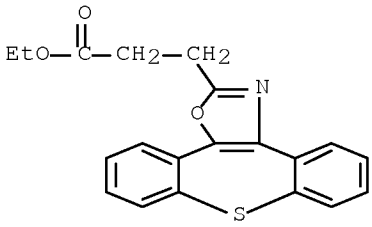

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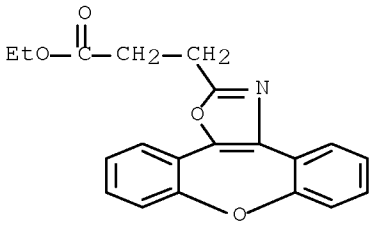

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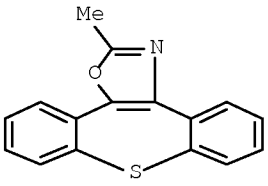

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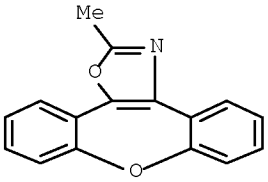

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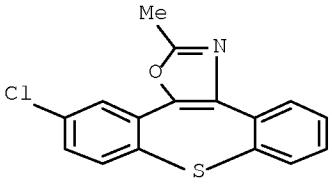

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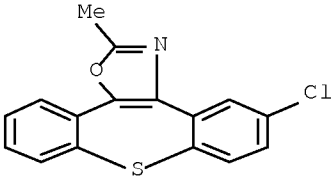

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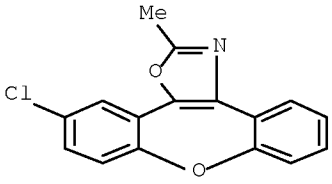

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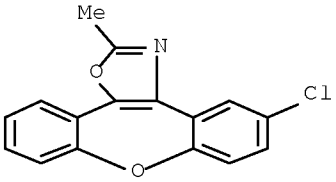

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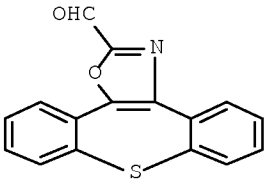

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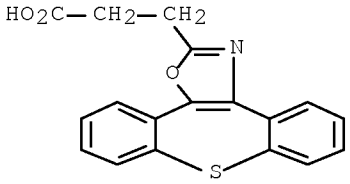

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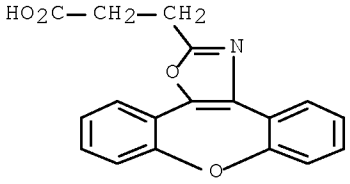

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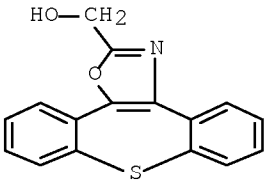

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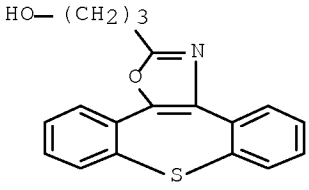

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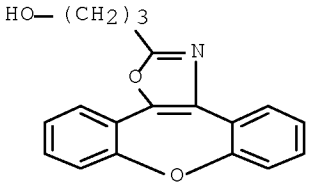

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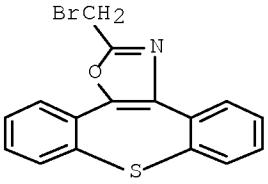

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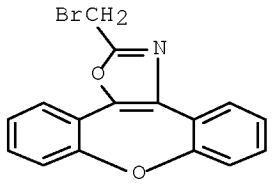

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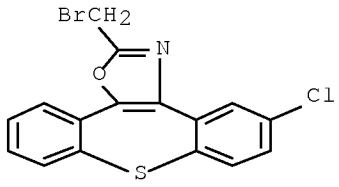

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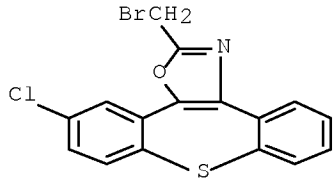

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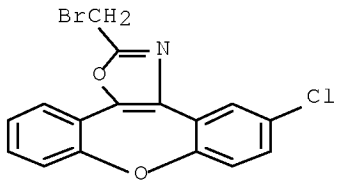

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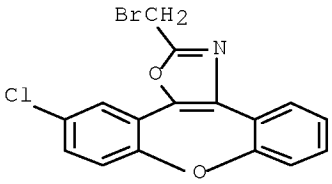

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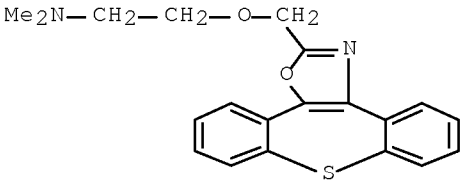
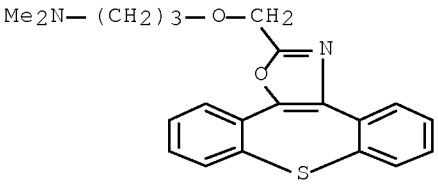
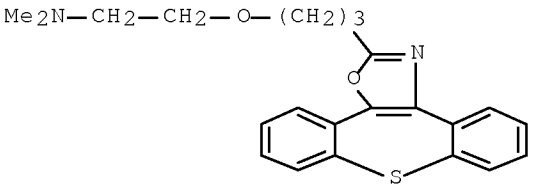


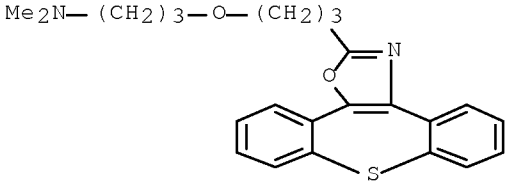
RN 612837-52-2 HCAPLUS
CN 1-Propanamine, 3-(dibenzo[2,3:6,7]thiepino[4,5-d]oxazol-2-ylmethoxy)-N,N-dimethyl- (CA INDEX NAME)



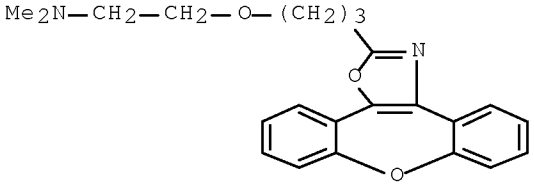
RN 612837-53-3 HCAPLUS
CN Ethanamine, 2-(3-dibenzo[2,3:6,7]thiepino[4,5-d]oxazol-2-ylpropoxy)-N,N-dimethyl- (CA INDEX NAME)



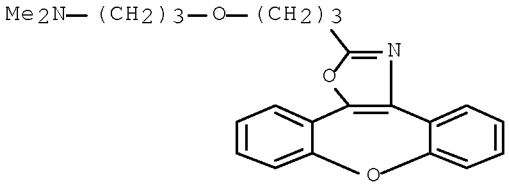
RN 612837-54-4 HCAPLUS
CN 1-Propanamine, 3-(3-dibenzo[2,3:6,7]thiepino[4,5-d]oxazol-2-ylpropoxy)-N,N-dimethyl- (CA INDEX NAME)



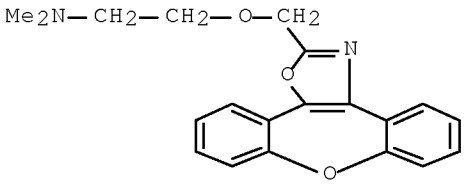
RN 612837-56-6 HCAPLUS
CN Ethanamine, 2-(3-dibenz[2,3:6,7]oxepino[4,5-d]oxazol-2-ylpropoxy)-N,N-dimethyl- (CA INDEX NAME)



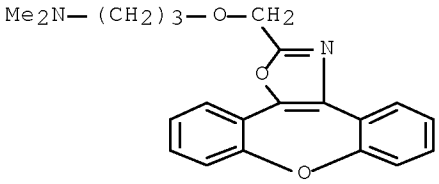
RN 612837-57-7 HCAPLUS
CN 1-Propanamine, 3-(3-dibenz[2,3:6,7]oxepino[4,5-d]oxazol-2-ylpropoxy)-N,N-dimethyl- (CA INDEX NAME)



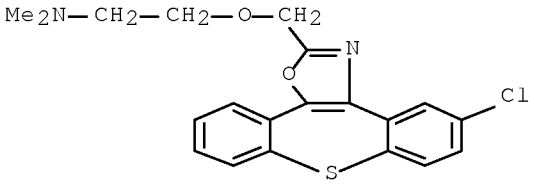
RN 612837-58-8 HCAPLUS
CN Ethanamine, 2-(dibenz[2,3:6,7]oxepino[4,5-d]oxazol-2-ylmethoxy)-N,N-dimethyl- (CA INDEX NAME)



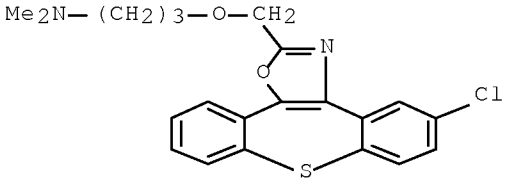
RN 612837-59-9 HCAPLUS
CN 1-Propanamine, 3-(dibenz[2,3:6,7]oxepino[4,5-d]oxazol-2-ylmethoxy)-N,N-dimethyl- (CA INDEX NAME)



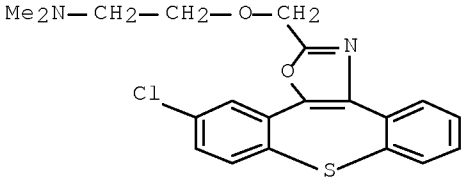
RN 612837-60-2 HCAPLUS
CN Ethanamine, 2-[(5-chlorodibenzo[2,3:6,7]thiepino[4,5-d]oxazol-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



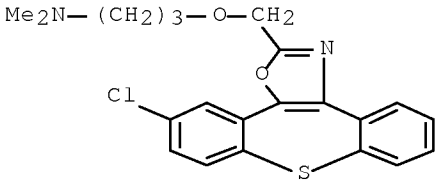
RN 612837-61-3 HCAPLUS
CN 1-Propanamine, 3-[(5-chlorodibenzo[2,3:6,7]thiepino[4,5-d]oxazol-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



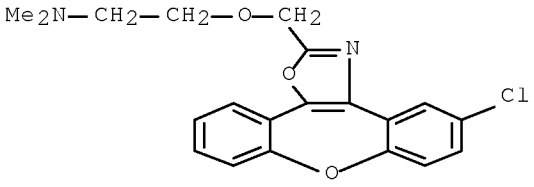
RN 612837-62-4 HCAPLUS
CN Ethanamine, 2-[(11-chlorodibenzo[2,3:6,7]thiepino[4,5-d]oxazol-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



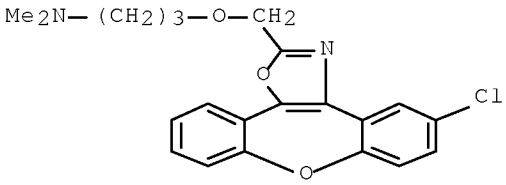
RN 612837-63-5 HCAPLUS
CN 1-Propanamine, 3-[(11-chlorodibenzo[2,3:6,7]thiepino[4,5-d]oxazol-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



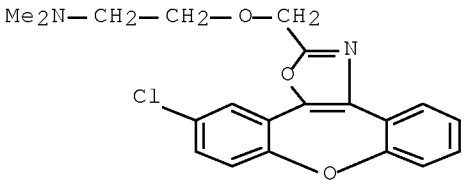
RN 612837-64-6 HCAPLUS
CN Ethanamine, 2-[(5-chlorodibenz[2,3:6,7]oxepino[4,5-d]oxazol-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



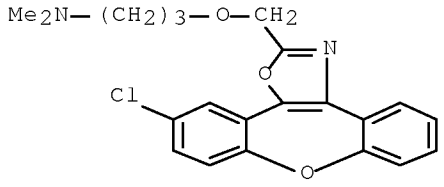
RN 612837-65-7 HCAPLUS
CN 1-Propanamine, 3-[(5-chlorodibenz[2,3:6,7]oxepino[4,5-d]oxazol-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



RN 612837-66-8 HCAPLUS
CN Ethanamine, 2-[(11-chlorodibenz[2,3:6,7]oxepino[4,5-d]oxazol-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



RN 612837-67-9 HCAPLUS
CN 1-Propanamine, 3-[(11-chlorodibenz[2,3:6,7]oxepino[4,5-d]oxazol-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:471937 HCAPLUS Full-text
DOCUMENT NUMBER: 143:1311
TITLE: Use of 1-oxadibenzo[e,h]azulenes for the manufacture of pharmaceutical formulations for the treatment and prevention of central nervous system diseases and disorders
INVENTOR(S): Mercep, Mladen; Mesic, Milan; Pesic, Dijana
PATENT ASSIGNEE(S): Pliva-Istrazivacki Institut D.O.O., Croatia
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005049010	A1	20050602	WO 2004-HR52	20041119
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1684742	A1	20060802	EP 2004-798731	20041119
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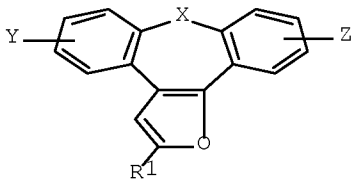
JP 2007512306	T	20070517	JP 2006-540629	20041119
US 20070173493	A1	20070726	US 2006-595935	20060809

PRIORITY APPLN. INFO.: HR 2003-955 A 20031121
WO 2004-HR52 W 20041119

OTHER SOURCE(S): MARPAT 143:1311
GI



I

AB The present invention relates to the use of compds. from the group of 1-oxadibenzo[e,h]azulenes (I; X = CH2, heteroatom such as O, S, SO, SO2, amino; Y, Z = H, halo, alkyl, haloalkyl, hydroxy, alkoxy, amino, thiol, sulfonyl, carboxy, cyano, nitro, etc.; R1 = CHO, alkyl, amino, etc.) and of their pharmacol. acceptable salts and solvates for the manufacture of a pharmaceutical formulation for the treatment and prevention of diseases, damages and disorders of the central nervous system (CNS) caused by disorders of the neurochem. equilibrium of biogenic amines or other neurotransmitters, such as serotonin, norepinephrine and dopamine. Thus, an in vitro affinity of I compds. for binding to recombinant human 5-HT2A and 5-HT2C serotonin receptors expressed in CHO-K1 or COS-7 cells was determined using a radioligand. The radioligand binding was inhibited by the test compds. proportionally to the affinity of a certain compound for the receptor and to the concentration of the compound Compds. showing IC50 and Ki in concns. lower than 1 μM were considered to be active. Compound 2-[(11-chloro-1,8-dioxadibenzo[e,h]azulen-2-yl- methoxy)ethyl]dimethylamine showed binding affinity to 5-HT2A and 5-HT2C receptors expressed as IC50 value less than 200 nM and Ki value less than 100 nM.

IC ICM A61K031-343
ICS A61K031-34; A61K031-38; A61K031-55; A61P025-00

CC 1-11 (Pharmacology)
Section cross-reference(s): 63

ST oxadibenzoazulene biogenic amine neurotransmitter central nervous system disease; dibenzoazulene oxa biogenic amine neurotransmitter CNS disease

IT Amines, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(biogenic; oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT Central nervous system, disease
Human
(oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT Neurotransmitters
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2A, binding to; oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 5-HT receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type 5-HT2C, binding to; oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT Opioid receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(δ1-opioid, binding to; oxadibenzoazulenes for treatment and

prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 50-67-9, Serotonin, biological studies 51-41-2, Norepinephrine 51-61-6, Dopamine, biological studies 56-86-0, L-Glutamic acid, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 199012-94-7D, Dibenzo[b,f]furo[2,3-d]oxepin, derivs. 628262-96-4 628262-97-5 628262-98-6 628262-99-7 628263-00-3 628263-01-4 628263-02-5 628263-03-6 628263-04-7, Dibenzo[b,f]furo[2,3-d]oxepin-2-methanol 628263-05-8
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

IT 50-67-9, Serotonin, biological studies 51-41-2, Norepinephrine 51-61-6, Dopamine, biological studies 56-86-0, L-Glutamic acid, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)

RN 50-67-9 HCAPLUS
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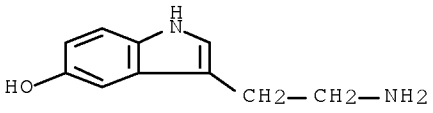
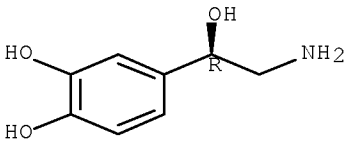
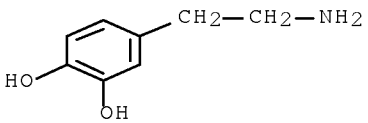


RN 51-41-2 HCAPLUS
CN 1,2-Benzenediol, 4-[(1R)-2-amino-1-hydroxyethyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

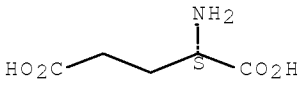


RN 51-61-6 HCAPLUS
CN 1,2-Benzenediol, 4-(2-aminoethyl)- (CA INDEX NAME)

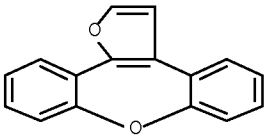


RN 56-86-0 HCAPLUS
CN L-Glutamic acid (CA INDEX NAME)

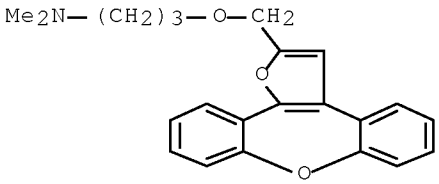
Absolute stereochemistry.



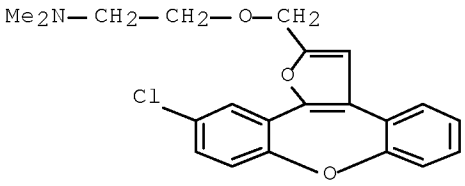
IT 199012-94-7D, Dibenzo[b,f]furo[2,3-d]oxepin, derivs.
628262-96-4 628262-97-5 628262-98-6
628262-99-7 628263-00-3 628263-01-4
628263-02-5 628263-03-6 628263-04-7,
Dibenzo[b,f]furo[2,3-d]oxepin-2-methanol 628263-05-8
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)
RN 199012-94-7 HCAPLUS
CN Dibenzo[b,f]furo[2,3-d]oxepin (9CI) (CA INDEX NAME)



RN 628262-96-4 HCAPLUS
CN 1-Propanamine, 3-(dibenzo[b,f]furo[2,3-d]oxepin-2-ylmethoxy)-N,N-dimethyl- (CA INDEX NAME)

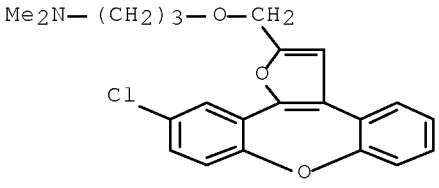


RN 628262-97-5 HCAPLUS
CN Ethanamine, 2-[(11-chlorodibenzo[b,f]furo[2,3-d]oxepin-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)

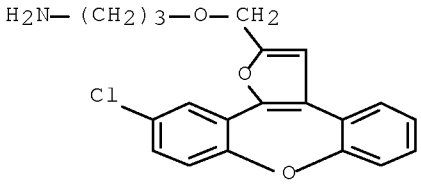


RN 628262-98-6 HCAPLUS

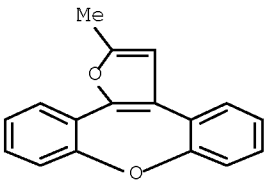
CN 1-Propanamine, 3-[(11-chlorodibenzo[b,f]furo[2,3-d]oxepin-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



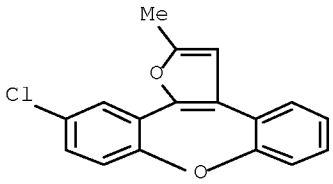
RN 628262-99-7 HCAPLUS
CN 1-Propanamine, 3-[(11-chlorodibenzo[b,f]furo[2,3-d]oxepin-2-yl)methoxy]- (CA INDEX NAME)



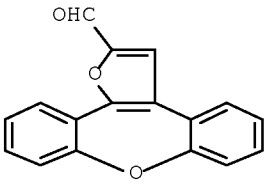
RN 628263-00-3 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin, 2-methyl- (CA INDEX NAME)



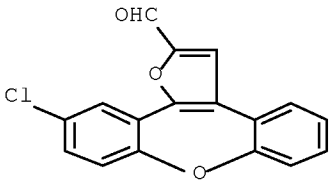
RN 628263-01-4 HCAPLUS
CN Dibenzo[b,f]furo[2,3-d]oxepin, 11-chloro-2-methyl- (CA INDEX NAME)



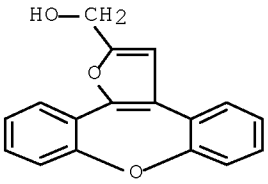
RN 628263-02-5 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-carboxaldehyde (CA INDEX NAME)



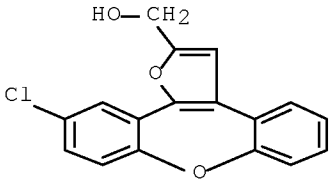
RN 628263-03-6 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-carboxaldehyde, 11-chloro- (CA INDEX NAME)



RN 628263-04-7 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-methanol (CA INDEX NAME)



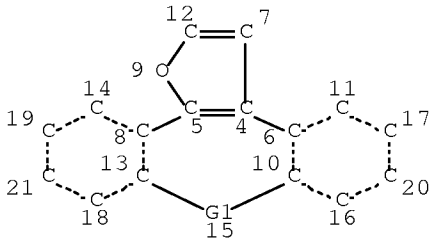
RN 628263-05-8 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-methanol, 11-chloro- (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RESULTS FROM REGISTRY, CAPLUS, AND USPATFULL

=> d que stat l15
L8 STR



VAR G1=O/S/N
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 18

STEREO ATTRIBUTES: NONE
L10 25 SEA FILE=REGISTRY SSS FUL L8
L11 12 SEA FILE=HCAPLUS ABB=ON L10
L12 6 SEA FILE=HCAPLUS ABB=ON L11 AND (?CENTRAL?(W)?NERV?(W)?SYST? OR CNS OR ?NEUROCHEM?(W)?EQUIL? OR ?BIOGEN?(W)AMINE? OR ?NEUROTRANSMIT?)
L13 1 SEA FILE=USPATFULL ABB=ON L11 AND (?CENTRAL?(W)?NERV?(W)?SYST? OR CNS OR ?NEUROCHEM?(W)?EQUIL? OR ?BIOGEN?(W)AMINE? OR ?NEUROTRANSMIT?)
L14 7 DUP REMOV L12 L13 (0 DUPLICATES REMOVED)
L15 7 SEA L14 AND (PRD<20041119 OR PD<20041119)

=> d ibib abs hitstr l15 1-7

L15 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:471937 HCAPLUS Full-text
DOCUMENT NUMBER: 143:1311
TITLE: Use of 1-oxadibenzo[e,h]azulenes for the manufacture of pharmaceutical formulations for the treatment and prevention of central nervous system diseases and disorders
INVENTOR(S): Mercep, Mladen; Mesic, Milan; Pesic, Dijana
PATENT ASSIGNEE(S): Pliva-Istrazivacki Institut D.O.O., Croatia
SOURCE: PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005049010	A1	20050602	WO 2004-HR52	20041119 <--

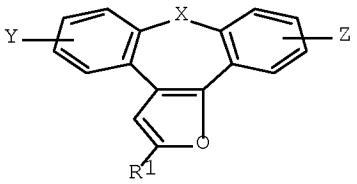
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1684742 A1 20060802 EP 2004-798731 20041119 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR, IS, YU

JP 2007512306 T 20070517 JP 2006-540629 20041119 <--
US 20070173493 A1 20070726 US 2006-595935 20060809 <--
PRIORITY APPLN. INFO.: HR 2003-955 A 20031121 <--
WO 2004-HR52 W 20041119

OTHER SOURCE(S): MARPAT 143:1311

GI

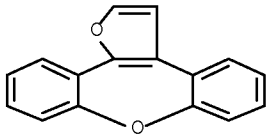


I

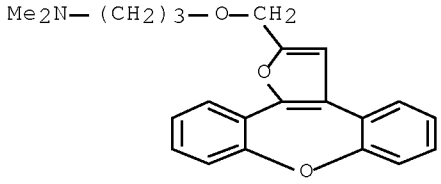
AB The present invention relates to the use of compds. from the group of 1-oxadibenzo[e,h]azulenes (I; X = CH2, heteroatom such as O, S, SO, SO2, amino; Y, Z = H, halo, alkyl, haloalkyl, hydroxy, alkoxy, amino, thiol, sulfonyl, carboxy, cyano, nitro, etc.; R1 = CHO, alkyl, amino, etc.) and of their pharmacol. acceptable salts and solvates for the manufacture of a pharmaceutical formulation for the treatment and prevention of diseases, damages and disorders of the central nervous system (CNS) caused by disorders of the neurochem. equilibrium of biogenic amines or other neurotransmitters, such as serotonin, norepinephrine and dopamine. Thus, an in vitro affinity of I compds. for binding to recombinant human 5-HT2A and 5-HT2C serotonin receptors expressed in CHO-K1 or COS-7 cells was determined using a radioligand. The radioligand binding was inhibited by the test compds. proportionally to the affinity of a certain compound for the receptor and to the concentration of the compound Compds. showing IC50 and Ki in concns. lower than 1 μM were considered to be active. Compound 2-[(11-chloro-1,8-dioxadibenzo[e,h]azulen-2-yl- methoxy)ethyl]dimethylamine showed binding affinity to 5-HT2A and 5-HT2C receptors expressed as IC50 value less than 200 nM and Ki value less than 100 nM.

IT 199012-94-7D, Dibenzo[b,f]furo[2,3-d]oxepin, derivs.
628262-96-4 628262-97-5 628262-98-6
628262-99-7 628263-00-3 628263-01-4
628263-02-5 628263-03-6 628263-04-7,
Dibenzo[b,f]furo[2,3-d]oxepin-2-methanol 628263-05-8
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other

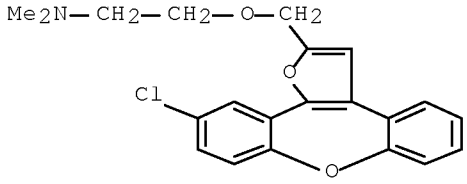
neurotransmitters)
RN 199012-94-7 HCAPLUS
CN Dibenzo[b,f]furo[2,3-d]oxepin (9CI) (CA INDEX NAME)



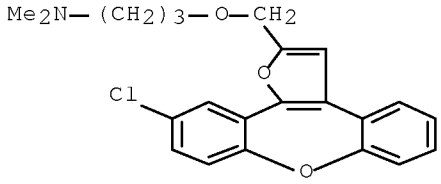
RN 628262-96-4 HCAPLUS
CN 1-Propanamine, 3-(dibenzo[b,f]furo[2,3-d]oxepin-2-ylmethoxy)-N,N-dimethyl- (CA INDEX NAME)



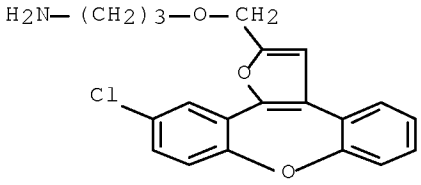
RN 628262-97-5 HCAPLUS
CN Ethanamine, 2-[(11-chlorodibenzo[b,f]furo[2,3-d]oxepin-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



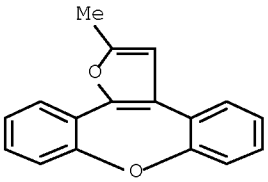
RN 628262-98-6 HCAPLUS
CN 1-Propanamine, 3-[(11-chlorodibenzo[b,f]furo[2,3-d]oxepin-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



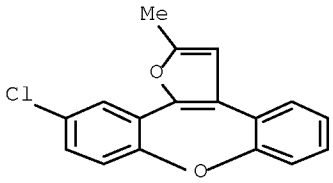
RN 628262-99-7 HCAPLUS
CN 1-Propanamine, 3-[(11-chlorodibenzo[b,f]furo[2,3-d]oxepin-2-yl)methoxy]- (CA INDEX NAME)



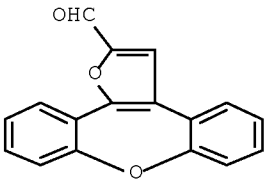
RN 628263-00-3 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin, 2-methyl- (CA INDEX NAME)



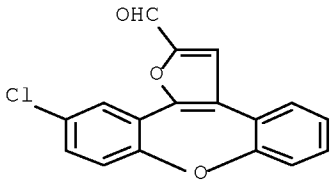
RN 628263-01-4 HCAPLUS
CN Dibenzo[b,f]furo[2,3-d]oxepin, 11-chloro-2-methyl- (CA INDEX NAME)



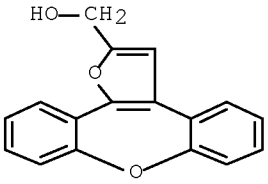
RN 628263-02-5 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-carboxaldehyde (CA INDEX NAME)



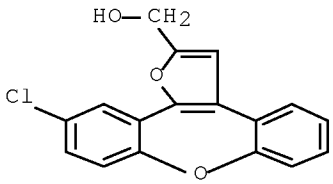
RN 628263-03-6 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-carboxaldehyde, 11-chloro- (CA INDEX NAME)



RN 628263-04-7 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-methanol (CA INDEX NAME)

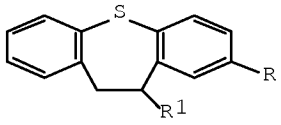


RN 628263-05-8 HCAPLUS
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-methanol, 11-chloro- (CA INDEX NAME)

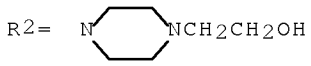


REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1983:143257 HCAPLUS Full-text
DOCUMENT NUMBER: 98:143257
ORIGINAL REFERENCE NO.: 98:21821a,21824a
TITLE: Neurotropic and psychotropic agents. CLXXIII. Fluorinated tricyclic neuroleptics with prolonged action: 3-fluoro-10-[4-(2-hydroxyethyl)piperazino]-10,11-dihydrodibenzo[b,f]thiepins with less common substituents in position 8
AUTHOR(S): Sindelar, Karel; Metysova, Jirina; Holubek, Jiri; Svatek, Emil; Ryska, Miroslav; Protiva, Miroslav
CORPORATE SOURCE: Res. Inst. Pharm. Biochem., Prague, 130 60, Czech.
SOURCE: Collection of Czechoslovak Chemical Communications (1983), 48(1), 144-55
CODEN: CCCCAK; ISSN: 0366-547X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 98:143257
GI



II

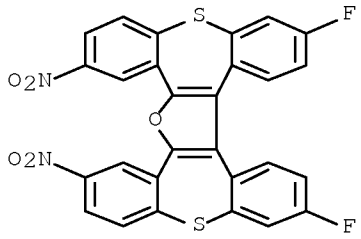


AB Cyclization of 4,2-F(4-O2NC6H4S)C6H3CO2H gave 3-fluoro-8-nitrodibenzo[b,f]thiepin-10(11H)-one (I). I was reduced to II (R = NO2, R1 = OH) which was chlorinated to II (R = NO2, R1 = Cl)(III). Condensation of III with R2H gave II (R = NO2, R1 = R2). Also prepared were II (R = NH2, Ac, SO2NMe; R1 = R2). These II are central nervous system depressants and apomorphine antagonists. I (R = NO2, R1 = R2) had ED50 of 0.27 mg/kg orally in mice in the rotarod test after 2 h compared to 2.2 mg/kg for octoclothepsin.

IT 85195-81-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 85195-81-9 HCAPLUS

CN Bisdibenzo[2,3:6,7]thiepino[4,5-b:4',5'-d]furan, 12,17-difluoro-3,7-dinitro- (9CI) (CA INDEX NAME)



L15 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1982:85513 HCAPLUS Full-text

DOCUMENT NUMBER: 96:85513

ORIGINAL REFERENCE NO.: 96:14043a

TITLE: Neurotropic and psychotropic agents. CLIV. Fluorinated tricyclic neuroleptics with prolonged action: 3-fluoro-8-halo derivatives of 10-piperazino-10,11-dihydrodibenzo[b,f]thiepins

AUTHOR(S): Protiva, Miroslav; Sindelar, Karel; Metysova, Jirina; Holubek, Jiri; Ryska, Miroslav; Svatek, Emil; Sedivy, Zdenek; Pomykacek, Josef

CORPORATE SOURCE: Res. Inst. Pharm. Biochem., Prague, 130 60, Czech.

SOURCE: Collection of Czechoslovak Chemical Communications (1981), 46(8), 1788-99
CODEN: CCCCAK; ISSN: 0366-547X

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 96:85513

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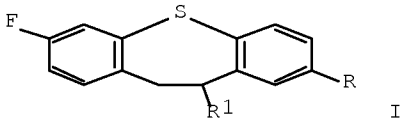


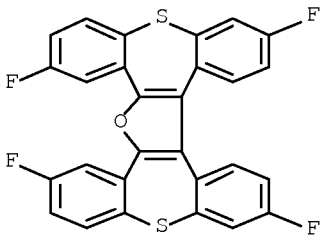
I

AB The title compds. I [R = F, R1 = 4-methylpiperazino; R = Br, iodo, R1 = 4-(2-hydroxyethyl)piperazino] were prepared by aminating I (R1 = Cl), obtained by chlorinating I (R1 = OH). The alcs. were obtained by reducing the ketones, prepared by cyclizing 5,2-F(HO2CCH2)C6H3SC6H4R-4 with polyphosphoric acid. I (R1 = substituted piperazino) have central nervous system depressant activity. Their structure-activity relationships are discussed.

IT 80709-39-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 80709-39-3 HCAPLUS

CN Bisdibenzo[2,3:6,7]thiepino[4,5-b:4',5'-d]furan, 3,7,12,17-tetrafluoro- (9CI) (CA INDEX NAME)



L15 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:146715 HCAPLUS Full-text

DOCUMENT NUMBER: 92:146715

ORIGINAL REFERENCE NO.: 92:23848h,23849a

TITLE: Neurotropic and psychotropic agents. CXXVII. Potential metabolites of tricyclic neuroleptics and their fluorinated analogs; 3-hydroxy-, 3-methoxy- and 3-fluoro-10-(4-methylpiperazino)-10,11-dihydrodibenzo[b,f]thiepin

AUTHOR(S): Protiva, Miroslav; Sindelar, Karel; Sedivy, Zdenek; Metysova, Jirina

CORPORATE SOURCE: Res. Inst. Pharm. Biochem., Prague, 130 00/3, Czech.

SOURCE: Collection of Czechoslovak Chemical Communications (1979), 44(7), 2108-23
CODEN: CCCCAK; ISSN: 0366-547X

DOCUMENT TYPE: Journal

LANGUAGE: English

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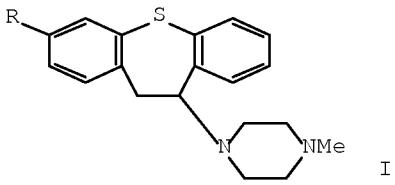


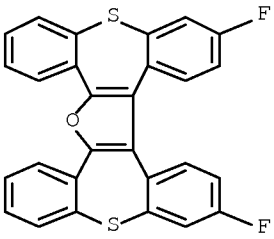
I

AB 4-Methoxy-2-(phenylthio)benzoic acid was transformed in 4 steps to the homologous acetic acid which was cyclized to 3-methoxydibenzo[b,f]-thiepin-10(11H)-one. Three further steps led to the 3-methoxy derivative of perathiepin (I, R = OMe) which was demethylated with BBr3 to give I (R = OH). I (R = F) was prepared from (4-fluoro-2-iodophenyl)acetic acid, which was prepared by several procedures. Whereas I (R = OMe) had only mild tranquilizing activity, I (R = OH) was more potent than perathiepin in the tests for central depressant and cataleptic effects. I (R = F), while lacking the properties of a neuroleptic agent, was highly central depressant and this effect was prolonged after oral administration.

IT 73129-02-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 73129-02-9 HCAPLUS

CN Bisdibenzo[2,3:6,7]thiepino[4,5-b:4',5'-d]furan, 12,17-difluoro- (9CI) (CA INDEX NAME)



L15 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1980:128852 HCAPLUS Full-text

DOCUMENT NUMBER: 92:128852

ORIGINAL REFERENCE NO.: 92:21015a,21018a

TITLE: Neurotropic and psychotropic agents. CXXIX. Fluorinated neuroleptics of the 10-piperazino-10,11-dihydrodibenzo[b,f]thiepin series; 6-fluoro derivatives of perathiepin, octoclothepin, doclothepin and some related compounds

AUTHOR(S): Cervena, Irena; Metysova, Jirina; Bartl, Vaclav; Protiva, Miroslav

CORPORATE SOURCE: Res. Inst. Pharm. Biochem., Prague, 130 00/3, Czech.

SOURCE: Collection of Czechoslovak Chemical Communications (1979), 44(7), 2139-55
CODEN: CCCCAK; ISSN: 0366-547X

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 92:128852

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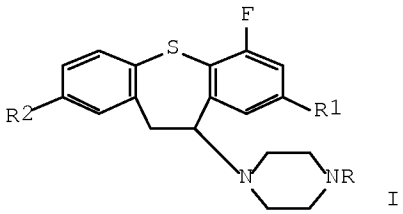


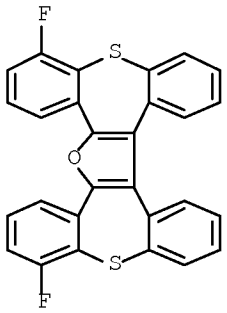
I

AB 6-Fluoro-10-piperazino-10,11-dihydrodibenzo[b,f]thiepins I (R = Me, CH2CH2OH, R1 = H, R2 = H, Cl; R = Me, R1 = Cl, R2 = H) were prepared via 2-(2-fluorophenylthio)phenylacetic acids, 6-fluorodibenzo[b,f]thiepin- 10(11H)-ones, the corresponding 10-hydroxy and 10-chloro compds. as intermediates. Fluorination in position 6 did not greatly influence the pharmacol. profile of the compds., indicating that hydroxylation in position 6 is only a minor metabolic pathway. I (R = Me, R1 = Cl, R2 = H) is a potent central depressant and neuroleptic agent with some protraction of the sedative effects. Many of the compds. also had bactericidal, fungicidal, and tuberculostatic activity.

IT 73129-48-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 73129-48-3 HCAPLUS

CN Bisdibenzo[2,3:6,7]thiepino[4,5-b:4',5'-d]furan, 1,9-difluoro- (9CI) (CA INDEX NAME)



L15 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1977:439416 HCAPLUS Full-text

DOCUMENT NUMBER: 87:39416

ORIGINAL REFERENCE NO.: 87:6219a,6222a

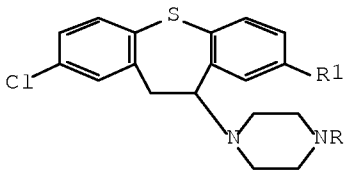
TITLE: Neurotropic and psychotropic agents. CV. Potential metabolites of noncataleptic neuroleptics: 2-chloro-8-hydroxy-10-(4-methylpiperazino)- and -10-[4-(2-hydroxyethyl)piperazino]-10,11-dihydrodibenzo[b,f]thiepin

AUTHOR(S): Valenta, V.; Bartl, V.; Dlabac, A.; Metysova, J.; Protiva, M.

CORPORATE SOURCE: Res. Inst. Pharm. Biochem., Prague, Czech.

SOURCE: Collection of Czechoslovak Chemical Communications (1976), 41(12), 3607-27
CODEN: CCCCAK; ISSN: 0366-547X

DOCUMENT TYPE: Journal
LANGUAGE: English
GI

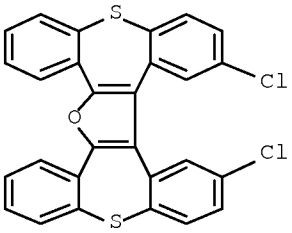


I, R=Me
II, R=CH_2CH_2OH

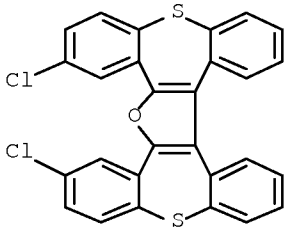
AB Starting from 5-chloro-2-(4-methoxyphenylthio)benzoic acid, 5 synthetic steps led to 2-chloro-8-methoxydibenzo(b,f)thiepin-10(11H)-one which was converted via 2 intermediates to 2-chloro-8-methoxy-10-(4- methylpiperazino)- and -10-[4-(2-hydroxyethyl)piperazino]-10,11- dihydrodibenzo(b,f)thiepin (I and II, R1 = OMe). Demethylation with BBr3 led to the title compds. I and II (R1 = OH), which are potential metabolites of noncataleptic neuroleptics doclothepin and VUFB-10032 (I and II, R1 = H). I and II (R1 = OH and OMe) have central depressant and cataleptic effects, the methoxy derivs. being more active than the hydroxy derivs. (LD50 and ED50 given). Modified methods of preparing 5-chloro-2-(phenylthio)benzoic acid and the corresponding alc. were described.

IT 63186-55-0P 63186-56-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 63186-55-0 HCAPLUS
CN Bisdibenzo[2,3:6,7]thiepino[4,5-b:4',5'-d]furan, 13,16-dichloro- (9CI) (CA INDEX NAME)



RN 63186-56-1 HCAPLUS
CN Bisdibenzo[2,3:6,7]thiepino[4,5-b:4',5'-d]furan, 3,7-dichloro- (9CI) (CA INDEX NAME)



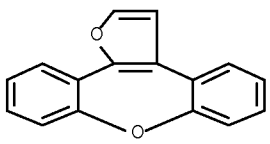
L15 ANSWER 7 OF 7 USPATFULL on STN
ACCESSION NUMBER: 2007:198145 USPATFULL Full-text
TITLE: 1-Oxadibenzo[e,h]azulenes for the treatment of central nervous system diseases and disorders
INVENTOR(S): Mercep, Mladen, Zagreb, CROATIA
Mesic, Milan, Zagreb, CROATIA
Pesic, Dijana, Sibenik, CROATIA
PATENT ASSIGNEE(S): Pliva-Istrazivacki Institut d.o.o., Zagreb, CROATIA, 10000 (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 20070173493	A1	20070726	
APPLICATION INFO.:	US 2004-595935	A1	20041119	(10)
	WO 2004-HR52		20041119	
			20060809	PCT 371 date

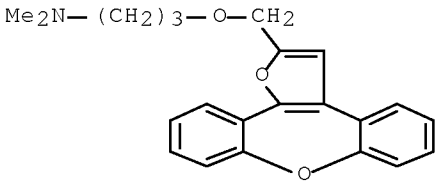
	NUMBER	DATE	
PRIORITY INFORMATION:	HR 2003-20030955	20031121	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: DARBY & DARBY P.C., P.O. BOX 770, Church Street Station, New York, NY, 10008-0770, US
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1
LINE COUNT: 941
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to the use of compounds from the group of 1-oxadibenzo[e,h]azulenes and of their pharmacologically acceptable salts and solvates in pharmaceutical formulation for the treatment and prevention of diseases, damages and disorders of the central nervous system (CNS) caused by disorders of the neurochemical equilibrium of biogenic amines or other neurotransmitters.

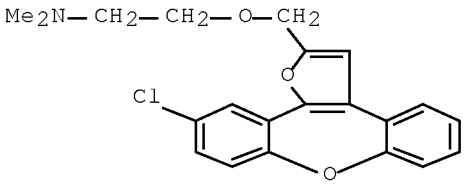
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT 199012-94-7D, Dibenzo[b,f]furo[2,3-d]oxepin, derivs.
628262-96-4 628262-97-5 628262-98-6
628262-99-7 628263-00-3 628263-01-4
628263-02-5 628263-03-6 628263-04-7,
Dibenzo[b,f]furo[2,3-d]oxepin-2-methanol 628263-05-8
(oxadibenzoazulenes for treatment and prevention of CNS disorders by modulating biogenic amines or other neurotransmitters)
RN 199012-94-7 USPATFULL
CN Dibenzo[b,f]furo[2,3-d]oxepin (9CI) (CA INDEX NAME)



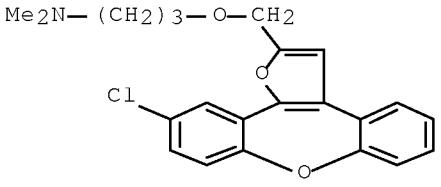
RN 628262-96-4 USPATFULL
CN 1-Propanamine, 3-(dibenzo[b,f]furo[2,3-d]oxepin-2-ylmethoxy)-N,N-dimethyl- (CA INDEX NAME)



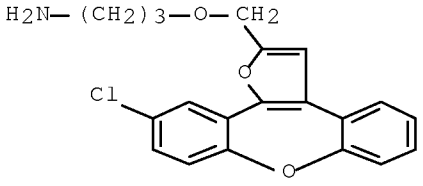
RN 628262-97-5 USPATFULL
CN Ethanamine, 2-[(11-chlorodibenzo[b,f]furo[2,3-d]oxepin-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



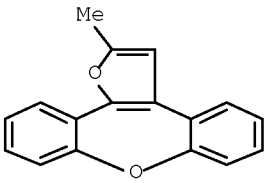
RN 628262-98-6 USPATFULL
CN 1-Propanamine, 3-[(11-chlorodibenzo[b,f]furo[2,3-d]oxepin-2-yl)methoxy]-N,N-dimethyl- (CA INDEX NAME)



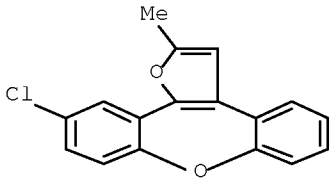
RN 628262-99-7 USPATFULL
CN 1-Propanamine, 3-[(11-chlorodibenzo[b,f]furo[2,3-d]oxepin-2-yl)methoxy]- (CA INDEX NAME)



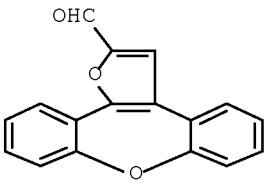
RN 628263-00-3 USPATFULL
CN Dibenzo[b,f]furo[3,2-d]oxepin, 2-methyl- (CA INDEX NAME)



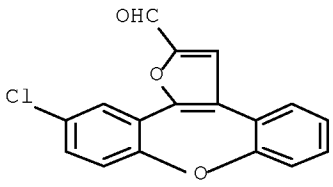
RN 628263-01-4 USPATFULL
CN Dibenzo[b,f]furo[2,3-d]oxepin, 11-chloro-2-methyl- (CA INDEX NAME)



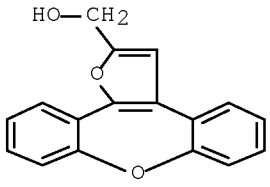
RN 628263-02-5 USPATFULL
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-carboxaldehyde (CA INDEX NAME)



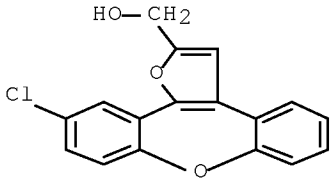
RN 628263-03-6 USPATFULL
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-carboxaldehyde, 11-chloro- (CA INDEX NAME)



RN 628263-04-7 USPATFULL
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-methanol (CA INDEX NAME)



RN 628263-05-8 USPATFULL
CN Dibenzo[b,f]furo[3,2-d]oxepin-2-methanol, 11-chloro- (CA INDEX NAME)



SEARCH HISTORY

=> d his ful

(FILE 'HOME' ENTERED AT 13:14:24 ON 09 JUN 2008)

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L1 54 SEA ABB=ON ("MERCEP MLADEN"/AU OR "MERCEP MLANDEN"/AU)
E MESIC MILAN/AU
L2 72 SEA ABB=ON ("MESIC M"/AU OR "MESIC MILAN"/AU)
E PESIC DIJANA/AU
L3 71 SEA ABB=ON ("PESIC D S"/AU OR "PESIC DEJAN"/AU OR "PESIC DIJANA"/AU)
L4 25 SEA ABB=ON L1 AND L2 AND L3
L5 2 SEA ABB=ON L4 AND 1(W)?OXADIBENZO?
SELECT RN L5 1-2

FILE 'REGISTRY' ENTERED AT 13:15:42 ON 09 JUN 2008
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FILE 'HCAPLUS' ENTERED AT 13:15:49 ON 09 JUN 2008
L7 2 SEA ABB=ON L5 AND L6

FILE 'REGISTRY' ENTERED AT 13:17:17 ON 09 JUN 2008
L8 STRUCTURE 628263-05-8
L9 1 SEA SSS SAM L8
L10 25 SEA SSS FUL L8

FILE 'HCAPLUS' ENTERED AT 13:19:13 ON 09 JUN 2008
L11 12 SEA ABB=ON L10
L12 6 SEA ABB=ON L11 AND (?CENTRAL?(W)?NERV?(W)?SYST? OR CNS OR ?NEUROCHEM?(W)?EQUIL? OR ?BIOGEN?(W)AMINE? OR ?NEUROTRANSMIT?)

FILE 'USPATFULL' ENTERED AT 13:21:10 ON 09 JUN 2008
L13 1 SEA ABB=ON L11 AND (?CENTRAL?(W)?NERV?(W)?SYST? OR CNS OR ?NEUROCHEM?(W)?EQUIL? OR ?BIOGEN?(W)AMINE? OR ?NEUROTRANSMIT?)

FILE 'HCAPLUS, USPATFULL' ENTERED AT 13:21:27 ON 09 JUN 2008
L14 7 DUP REMOV L12 L13 (0 DUPLICATES REMOVED)
L15 7 SEA ABB=ON L14 AND (PRD<20041119 OR PD<20041119)

FILE HOME

FILE HCAPLUS

FILE COVERS 1907 - 9 Jun 2008 VOL 148 ISS 24
FILE LAST UPDATED: 8 Jun 2008 (20080608/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 6 JUN 2008 HIGHEST RN 1026208-38-7
DICTIONARY FILE UPDATES: 6 JUN 2008 HIGHEST RN 1026208-38-7

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http://www.cas.org/support/stngen/stndoc/properties.html

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 5 Jun 2008 (20080605/PD)
FILE LAST UPDATED: 5 Jun 2008 (20080605/ED)
HIGHEST GRANTED PATENT NUMBER: US7383587
HIGHEST APPLICATION PUBLICATION NUMBER: US20080134401
CA INDEXING IS CURRENT THROUGH 5 Jun 2008 (20080605/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 5 Jun 2008 (20080605/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2008
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2008